points, a certain curve (A C) will be traced out. When this curve is precisely the same as another it is certain that the same form of wave as to height and length will be produced; and, for the same reason, when the curves differ the forms of the waves produced will differ.

Or, instead, let the abscissa A B be a time scale. The curve resulting from the time scale will have a definite relation to that from the distance scale; and it seems pretty certain, as like causes must produce like effects, that the form of the wave produced, as it exists at the point B, will be determined by the nature of these curves, and stand in some definite relation to the area A B C—a relation which, however difficult to determine, shows the infinite variety which the form of the wave (in which the height and length are only particular ordinates) may assume.

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Art. XVII.—*Notes on the Newly-found Satellites of Mars.*

By R. L. J. Ellery, F.R.S., F.R.A.S.

[Read December 13th, 1877.]

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Art. XVIII.—*On the Telephone.*

By W. C. Kernot, M.A., C.E.

[Read December 13th, 1877.]